



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

OCT 18 2016

In Reply Refer To: 3AP20

Mr. Mark Feldmeier
President
Paul Wissmach Glass
420 Stephen Street
Paden City, WV 26159

Dear Mr. Feldmeier:

Enclosed is the Air Compliance Inspection Report for EPA's September 14, 2016 inspection of Paul Wissmach Glass' manufacturing facility, located in Paden City, WV. Please take note of the Areas of Concern on Page 5 of the report.

If you have questions or comments pertaining to the report, please contact Ms. Gwendolyn Supplee of the Air Protection Division at (215) 814-2763.

Sincerely,

A handwritten signature in dark ink, appearing to read "BA", is written over a horizontal line.

Bruce Augustine, Acting Associate Director
Office of Air Enforcement & Compliance Assistance

Enclosure

cc: James Robertson, WVDEP





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Paul Wissmach Glass
420 Stephen Street
Paden City, West Virginia 26159
Inspection Date: September 14, 2016

SIC Code: 3229

CAA ID: WV00009500004

Attendees:

USEPA

Bruce Augustine, Region III Air Enforcement, (215) 814-2131
Gwendolyn K. Supplee, Region III Air Enforcement, (215) 814-2763

WVDEP


Renu Chakrabarty, WV Division of Air Quality
James Robertson, WV Division of Air Quality

Paul Wissmach Glass

Dan Lynch, Plant Manager, (304) 337-2253

Environmental Consultant

John Keeling, VP MSES Consultants Inc., (304) 423-5373


_____, 10/18/16
Bruce J. Augustine Date


_____, 10/18/16
Gwendolyn K. Supplee Date



BACKGROUND:

Paul Wissmach Glass (PWG) is a manufacturer of colored glass sheets that are used in the stained glass industry. Colored glass sheets are packaged and shipped to customers all over the world. The glass sheets are used in multiple applications by the end user. The facility commenced operation in the early 1900's and has operated as a glass manufacturing facility since that time.

The facility does not have an operating permit or Title V permit to operate from the West Virginia Department of Environmental Protection (WVDEP) for its glass manufacturing operations. However, WVDEP indicated during the inspection that there was a permit issued for a baghouse used to control particulate matter emissions. The facility is considered a true minor source by WVDEP for both criteria pollutants and hazardous air pollutants (HAP's).

OPENING MEETING:

EPA arrived at the facility at approximately 9:00AM on September 14, 2016 and proceeded to the main office where we were met by Mr. Dan Lynch, Plant Manager. Renu Chakrabarty and James Robertson, of the WVDEP, had arrived a few minutes earlier. In addition, PWG's environmental consultant, Mr. John Keeling was present at the opening meeting. EPA presented their credentials and indicated to Mr. Lynch that EPA would be conducting an on-site Clean Air Act inspection of the facility to gain an understanding of the scope of their operations, what emission sources are operating at the facility, and what the potential emissions are. The scope of the inspection included an opening meeting to discuss the current and past facility operations, and an on-site visual inspection of the facility¹. Prior to discussing facility operations, EPA informed PWG that any information provided during the inspection (including photographs) they deemed to be confidential business information (CBI) could be marked as such and would be treated as such according to EPA's CBI procedures².

EPA apprised PWG that this inspection was being conducted in response to recent developments in the colored glass industry and to determine the use of metal hazardous air pollutants (HAP's) (chromium, cadmium, manganese, arsenic, lead, and nickel) in their glass formulations. PWG uses and emits several metal HAP's in their glass process. The different metal HAP's provide specific colors in the glass making process. In addition, the facility emits several pollutants regulated under the Clean Air Act, including NOx and particulate matter.

Mr. Lynch stated that the facility commenced operation at the current location in the early 1900's. The facility has been making colored glass the entire time they have been operating. He has been employed at the facility for at least the last ten years. The facility is privately owned by Mr. Mark Feldmeier and has been owned by his family for over 50 years.

PWG operates two types of furnaces to produce molten glass: Pots and Tanks. Eight of the furnaces are pots and five are tanks. PWG typically operates a combination of eight total

¹ PWG was informed of the inspection via telephone of the inspection on September 13, 2016.

² PWG did not claim any information as CBI during the inspection.



furnaces at any given time. The facility operates approximately 50 weeks per year with a two week shutdown in the summer for maintenance. PWG operates 6 days/week and operates a single shift each day. Each of the furnaces operates about 39 weeks per year. Pots used in the furnaces last about 3-6 months and take about two weeks to heat up at startup and about a week to cool down when they are taken out of service. The tank furnaces produce clear, white, and some amber glass while the pot furnaces produce colored glass. Mr. Lynch stated that each of the pot furnaces uses metal HAP as a raw material in the batch while only one tank furnace uses metal HAP (#14 uses Manganese). Arsenic is currently used in the process and, according to Mr. Lynch, should be totally phased out of the process by the end of the year. PWG also uses lead to produce cranberry and silver glass approximately twice each year. He further stated that the lead is a percentage of silica and is not pure lead.

PWG doesn't track the amount of glass they melt each day in each furnace. They track facility production by the ft² of glass produced on a daily basis. PWG also does not monitor the individual natural gas use in each furnace. The natural gas is tracked using a single facility meter. All of the furnaces combust natural gas as the fuel source and melt glass between 2200-2350°F. Once the furnaces startup (heat up to glass melting point) they are not taken out of service until the pot is replaced or they are taken out of service for overhaul (tank furnace). Pot furnaces are charged with a raw material batch and then additional batch is added every 3-4 hours over a 16-17 hour period. Molten glass is extracted over a period of about 2 hours. The tank furnaces are charged with raw material twice about four hours apart. Raw material is added to the pot and tank furnaces by shovel and molten glass is removed with a ladle. A typical batch is 700lb and are mixed on a late shift or early in the morning. PWG typically uses no more than 20% cullet in the batch mix, however, PWG indicated that certain batches can be comprised of 100% cullet. Mr. Lynch stated that the return of glass on batch (by weight) is about 85%.

PWG builds each of their furnaces in-house with the exception of the actual pots used in the pot furnaces. The pots are purchased from Germany. PWG currently has on-site the following furnaces:

Furnace #	Type	Operating During Inspection
1	Tank	No
2	Pot	No
3	Pot	Yes
4	Tank	No
5	Tank	Yes
6	Tank	No
7	Pot	Yes
8	Pot	Yes
10	Pot	No
11	Pot	Yes
12	Pot	Yes
13	Pot	Yes
14	Tank	Yes



The pot furnaces are vented through a common flue located under the furnaces. Pot furnaces 2, 3, 7, 8 are vented through a common stack while pot furnaces 10, 11, 12, 13 and tank furnace 14 are vented through another common stack. The furnaces and the stacks are not equipped with any emission controls to limit the emissions of NOx or PM. Tank furnaces 4, 5, and 6 vent into a common flue and then through a common stack that is located on the roof of the building, while Tank 1 has its own dedicated exhaust stack.

Prior to the inspection, EPA, in an email, to PWG, requested specific records regarding the facility operation³. PWG provided copies of natural gas use on a monthly basis for the entire facility from 2011- August 2016. PWG also provided the annual usage for Arsenic, Cadmium, Chromium, Lead, Manganese, and Nickel for 2013-2015. PWG stated that they have not submitted and permit applications to WVDEP, have not completed any emission calculations, do not track the hours of operation per furnace, and do not track the amount of glass melted in each furnace.

This concluded the opening meeting.

PLANT INSPECTION:

The plant walkthrough commenced immediately following the opening meeting. All photographs taken during the inspection are included as Attachment 2 to this report. PWG stores extra clay pots for use in the pot furnaces. There are three different sizes of pots because there are different sizes of pot furnaces. Mr. Lynch stated that the pots last about 3-6 months before needing to be replaced. The main raw materials used in the process are sand, soda ash and feldspar that are delivered by rail and are stored in silos. PWG receives a sand railcar every 3-4 weeks, they also receive 3-4 soda ash railcars/yr and a feldspar railcar twice per year. Lime is delivered by truck and stored in a bin. The remaining raw materials are delivered by truck and are acquired in bags. Raw materials are weighed depending on the batch formulation and added to a hopper. The hopper is then dumped into a mixer and then returned to the hopper. The hoppers are transferred to the furnace area where the raw material is added to the furnace. The raw material mixer is controlled by pulse jet baghouse to control PM emissions. The stack for the baghouse was observed and there was no PM evident from the stack exit. There was no batch mixing occurring during the inspection.

Several of the furnaces were operating during the inspection. There were no fugitive emissions observed at any of the furnaces. Mr. Lynch stated that furnaces 10-14 vent to a common stack located outside while furnaces 2, 3, 7, and 8 also vent to a second identical common stack. Furnaces 4, 5, 6 also vent to a smaller stack located on the roof. Furnace 10 was observed under repair as was Furnace #6. Furnaces 7-8 are the largest pot furnaces and were operating during the inspection. Furnace 2 was in a heating stage and was not ready to receive raw material. Mr. Lynch stated that PWG can make 16 different textured glasses in their process. Molten glass was observed being removed from two furnaces using a ladle. The molten

³ A copy of the email is included as Attachment 1 to this report.



glass was then placed on a mixing table where it was mixed by hand before going through a roll press. The molten glass is pressed into a long sheet before it enters to the single annealing lehr. The lehr was operating during the inspection and uses natural gas to control the cooling of the glass to preserve its properties. Glass sheets take about 40-60 minutes to travel through the lehr. After exiting the lehr, the sheets are cut into their size and sent to packaging. The sheets are packaged in wooden crates. There are no emission sources after the annealing process. This completed the plant walkthrough.

PWG stated that they believe they are not subject to 40 C.F.R. Part 63, Subpart SSSSSS because their furnaces are not continuously charged with material. The furnaces are maintained at a temperature just below their charging temperature when they are between batches. In addition, their position is that they are not subject to 40 C.F.R. Part 61, Subpart N because they only use arsenic in pot furnaces, which are exempt from the regulation.

RECORDS OBTAINED DURING THE INSPECTION:

1. Natural gas usage facility wide January 2011-August 2016
2. Annual metal HAP usage 2013-2015

AREAS OF CONCERN:

The following bullets have been identified as *potential* issues identified during the inspection. They are issues that require either further investigation by EPA or explanation by PWG. Any additional information concerning these areas provided by PWG would provide useful in determining the extent of any potential future actions by EPA.

- PWG operates nine glass furnaces that use metal HAP that are part of their raw materials for some batches. These furnaces operate an average of 39 weeks per year and are continuously fired with natural gas once they are started. These furnaces are potentially subject to MACT Subpart SSSSSS: National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources. If they are subject to this regulation, PWG has not complied with the notification, emission standards, recordkeeping, or reporting provisions of this regulation.



Attachment 1

augustine, bruce

From: augustine, bruce
Sent: Tuesday, September 13, 2016 10:37 AM
To: 'dreamz1989@aol.com'
Cc: Supplee, Gwendolyn; 'james.robertson@wv.gov'; 'renu.m.chakrabarty@wv.gov'
Subject: EPA Site Visit Wissmach Glass

Mr. Lynch,

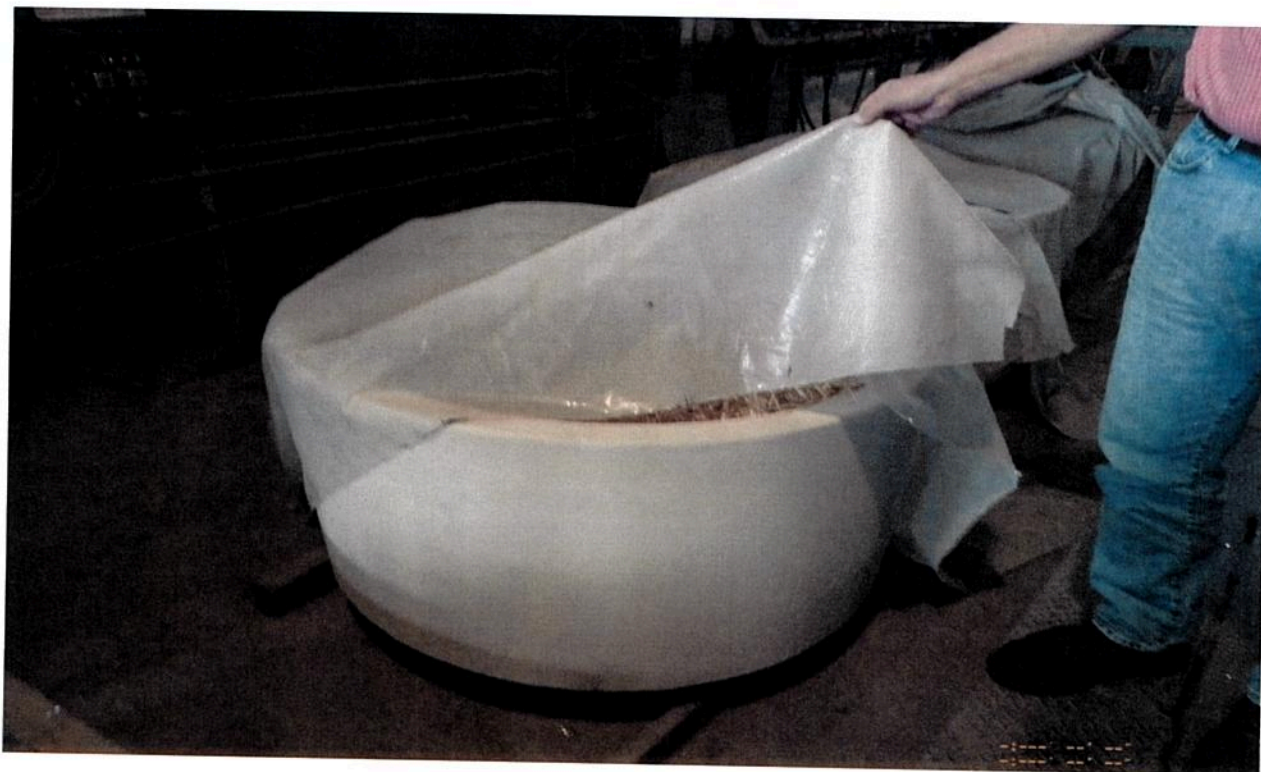
I spoke with Mr. Feldmeier this morning to confirm EPA's site visit to Wissmach Glass on 09/14/2016. We should arrive at the facility at approximately 9AM. Representatives of the WVDEP will also be in attendance. During the inspection we hope to have an opening meeting to discuss the daily operations of the facility and the operating history. In addition, we would like to conduct a walkthrough of the plant. Photographs will be taken of the process during the walkthrough. In an effort to expedite the inspection, please have the following information available during the inspection:

1. Tons of glass pulled from each furnace for years 2014-2016
2. Pounds of each metal hazardous air pollutants (arsenic, cadmium, manganese, chromium, etc) used in batch formulations for 2014-2016
3. Copies of any permit applications or requests for determination for permits sent to the WVDEP or EPA since 2010.
4. Copies of any emission calculations for nitrogen oxide (NOx), particulate matter and hazardous air pollutants at the facility for each year since 2010
5. Fuel use in gallons or SCF for each year since 2010
6. Hours of operation for each furnace on-site for 2014-2016

I realize you might not have some of this information or that some may have been provided in your June 2016 response to EPA. Please provide any information you can during the visit tomorrow. Thank you.

Bruce J. Augustine
Senior Enforcement Officer
USEPA Region III
1650 Arch Street
Mailcode: 3AP20
Philadelphia, PA 19103
(215) 814-2131

Attachment 2



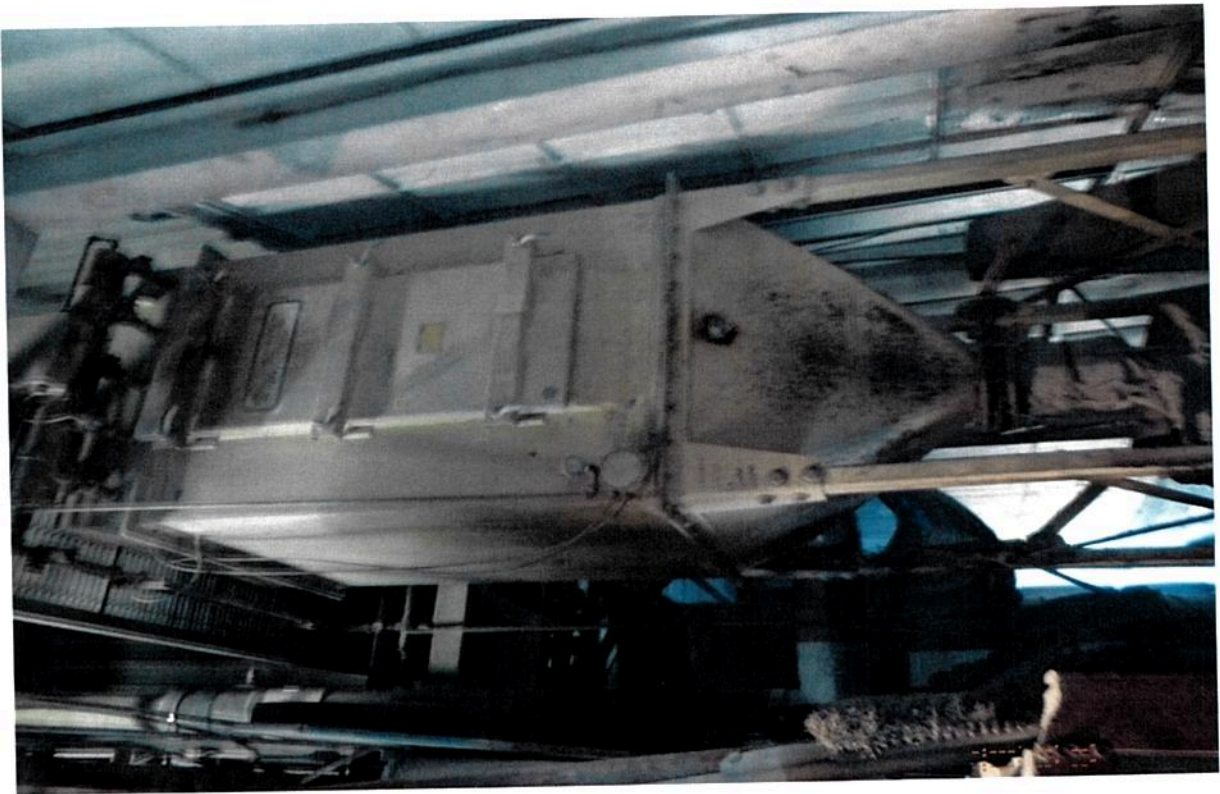
1. Intermediate Pot for Pot Furnace – Wissmach Glass – 09/14/2016



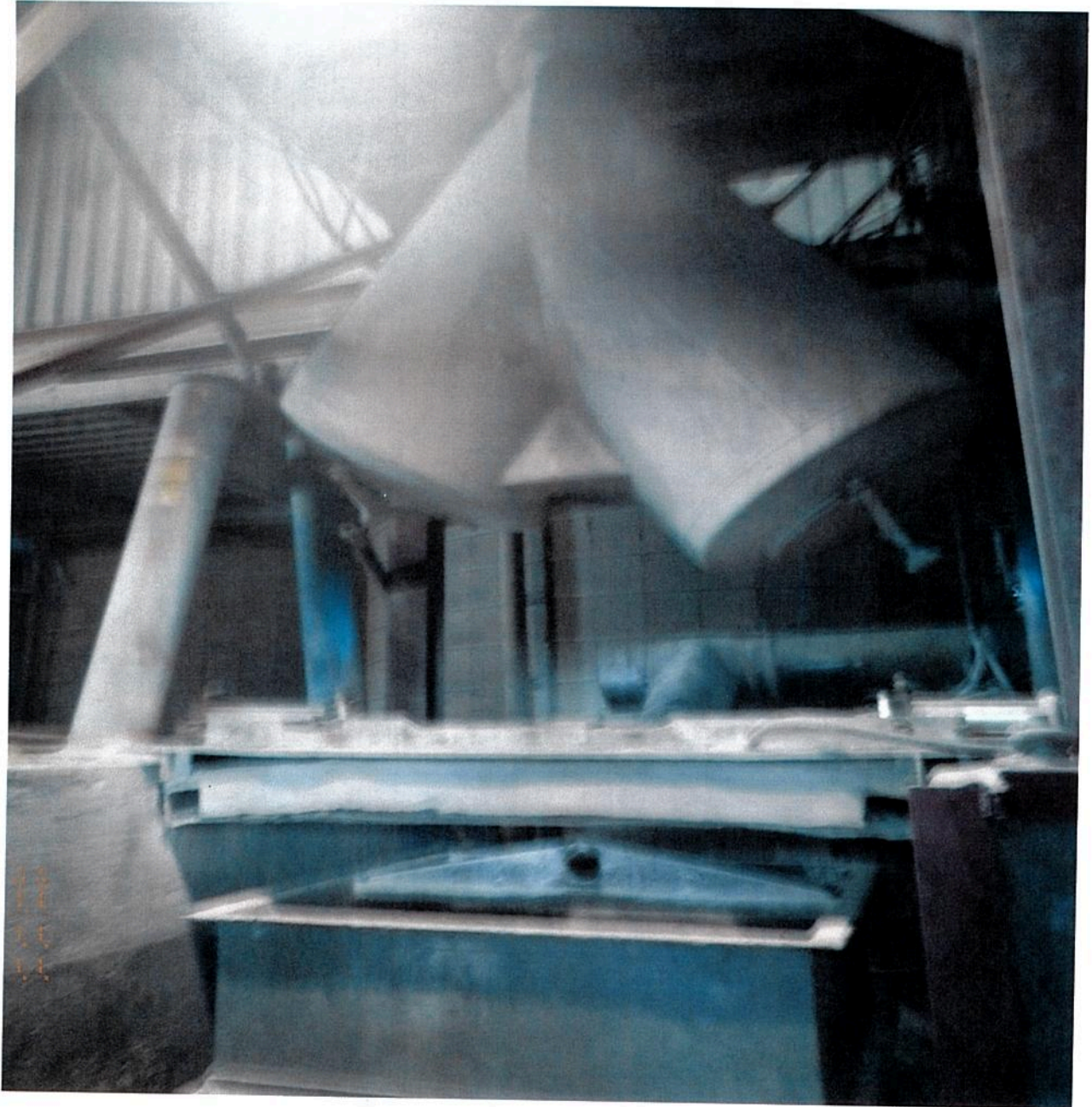
2. Large Clay Pot for Pot Furnace – Wissmach Glass – 09/14/2016



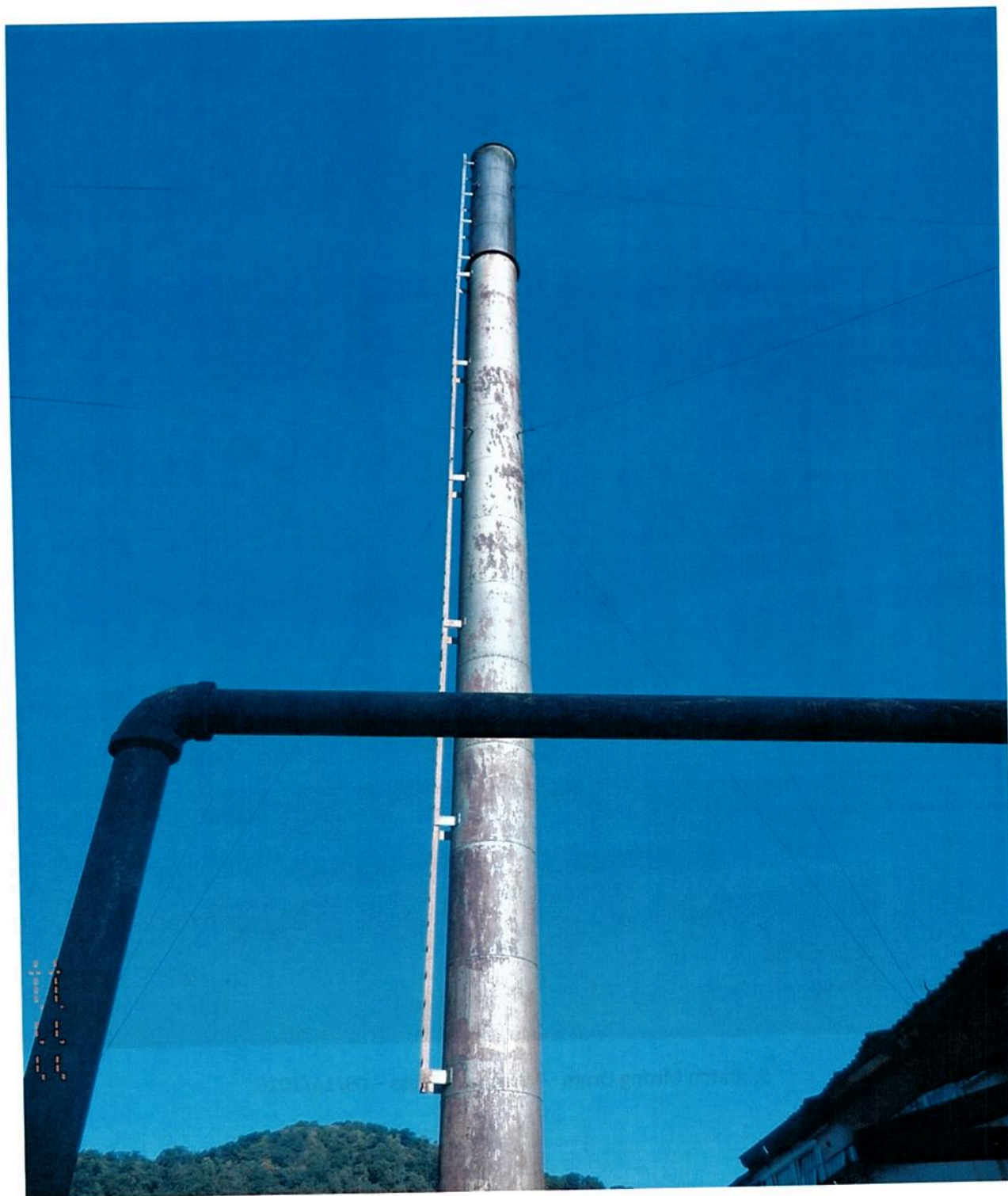
3. Raw Material Storage Area – Wissmach Glass – 09/14/2016



4. Baghouse for PM Control in Batch Mixing Area – Wissmach Glass – 09/14/2016



5. Batch Mixing Drum – Wissmach Glass – 09/14/2016



6. Exhaust Stack for Furnaces 10, 11, 12, 13, 14 – Wissamch Glass – 09/14/2016



7. Exhaust Stack for Furnaces 2, 3, 7, 8 - Wissmach Glass – 09/14/2016



8. Furnace 10 Out of Service Under Repair - Wissmach Glass – 09/14/2016



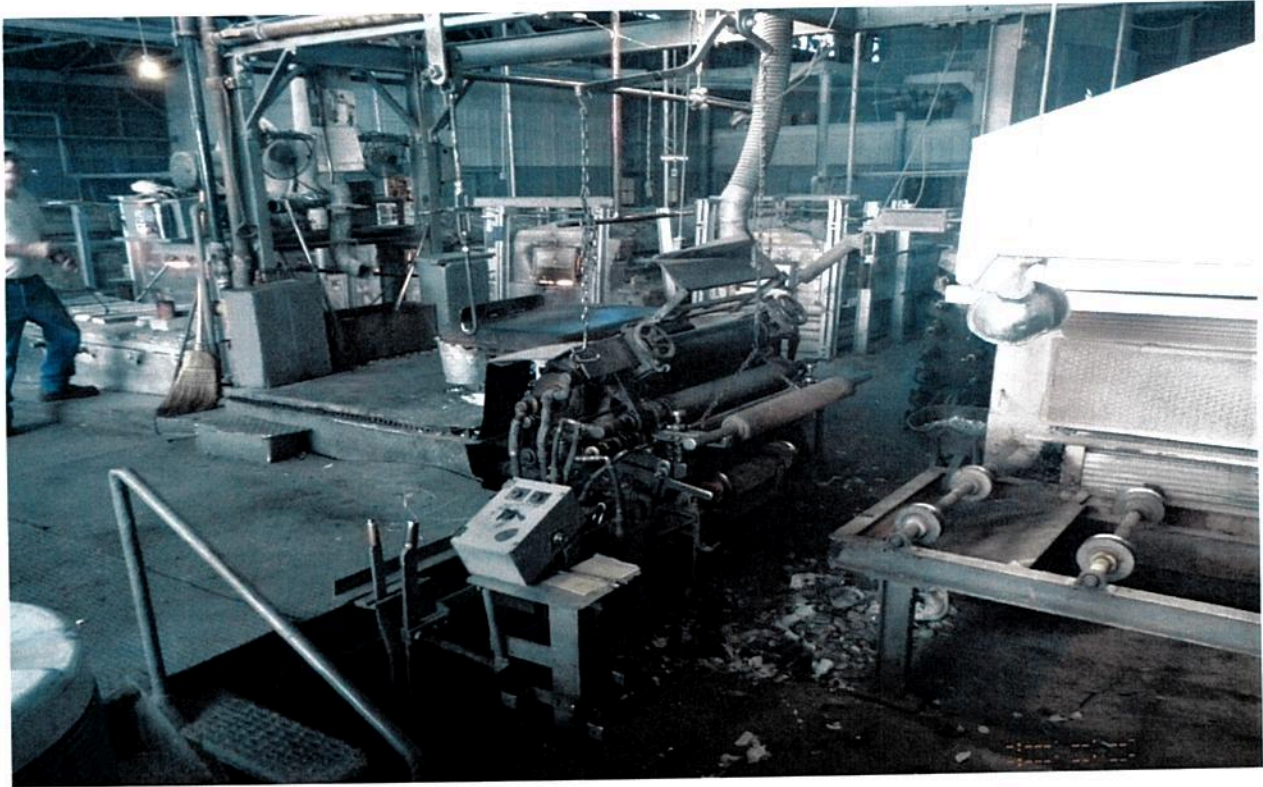
9. Furnaces 11-14 in Operation - Wissmach Glass – 09/14/2016



10. Furnace #5 in Operation - Wissmach Glass – 09/14/2016



11. Furnace #7 in Operation - Wissmach Glass – 09/14/2016



12. Molten Glass Mixing Table - Wissmach Glass – 09/14/2016



13. Entrance to Annealing Lehr – Wissmach Glass – 09/14/2016



14. Exit to Annealing Lehr – Wissmach Glass – 09/14/2016



15. Finished Product Inventory for Shipping – Wissmach Glass – 09/14/2016

